## What is claimed is:

1. An apparatus for recording a video signal into a recording medium, the video signal being included in a stream signal, the apparatus comprising:

a detector configured to detect display time information included in the stream signal;

a decoder configured to decode the stream signal to output the video signal;

a scaler configured to change a display scale of the video signal outputted by the decoder in response to a desired size of a thumbnail;

a switch connected to an output of the scaler;

a memory connected via the switch to the scaler;

a display time information acquisition unit configured to acquire the display time information detected by the detector in response to an acquisition command for the thumbnail; and

a controller configured to control a switching operation of the switch so that the video signal outputted from the scaler is stored in the memory, the outputted video signal corresponding to the display time information acquired by the display time information acquisition unit.

- 2. The apparatus according to claim 1, wherein the memory is configured to memorize the video signal sectioned by a sync signal and outputted from the scaler.
- 3. A method for recording a video signal into a recording medium, the video signal being included in a stream signal, the method comprising the steps of:

detecting display time information included in the stream signal;
decoding the stream signal to output the video signal;

changing a display scale of the outputted video signal in response to a desired size of a thumbnail;

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acquiring the detected display time information in response to an acquisition command for the thumbnail; and

controlling a flow of the video signal of which display scale is changed is stored in a memory, the stored video signal corresponding to the acquired display time information.

4. A computer-readable program for recording a video signal into a recording medium, the video signal being included in a stream signal, the program allowing a computer to monitor and control the steps of:

detecting display time information included in the stream signal; decoding the stream signal to output the video signal;

changing a display scale of the outputted video signal in response to a desired size of a thumbnail;

acquiring the detected display time information in response to an acquisition command for the thumbnail; and

controlling a flow of the video signal of which display scale is changed is stored in a memory, the stored video signal corresponding to the acquired display time information.

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